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ABSTRACT

A study examined the relationship between educational investments and economic development in the small community of Canandaigua, New York. A field study approach was used to collect data pertaining to the city's population characteristics, income characteristics, economic conditions, unemployment rates, and housing conditions. These data were analyzed in conjunction with figures pertaining to Canandaigua's investment in continuing adult education, job training, formal education, and community education. Comparison of these data with formal guidelines for educational investment in a community of the types of Canandaigua indicated that the city is spending more than enough of its available money on educational enterprises. However, too much is being spent on formal education. Therefore, recommendations were made calling for increased funding in the areas of adult and continuing education. The investment guidelines also suggest that Canandaigua must provide more money for both continuing and job training education. Recommendations included calls for similar studies in other communities and for using bond ratings to determine the economic level of a community. (A related dissertation on educational investments and economic growth in smaller communities is available separately--see note.) (MN)

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EDUCATIONAL INVESTMENTS AND ECCONOMIC DEVELOPMENT:A FIELD STUDY

John Champaigne
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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Often education is viewed by society in general, and taxpayers in particular, as a parasitic organism which consumes large quantities of capital resources without apparent benefit or economic return. However, evidence has been accumulated over the last twenty years which indicates that education and economic growth have a relationship which can be described more as symbiotic. Schultz, Denison, Abranovitz, Jensen, and Hiemstra have each conducted studies which when taken collectively indicate that educational investments and economic growth are related in positive, measurable ways. Denison (1974) reported that as much as 14 percent of the national growth rate between 1929 and 1969 could be attributed to education. The magnitude and importance of the relationship between education and the economy becomes evident when this 14 percent of educationally induced growth is translated into $61.7 billion in 1958 dollars over the forty-year period.

However impressive the measurable economic benefits of education are, the more difficult to measure, hence more intangible benefits to society might be more significant. Some of these indirect benefits are related to work, government, health, and the quality of life. Many studies have indicated that as education and training increase there is also an increase in personal satisfaction, participation in government, and hope for the future.

It is not the intention of this project to chronicle the beneficial relationship between proper educational investments and economic growth. However, a basic working assumption has been made that these two constructs are inextricably related in important ways. The importance of that relationship is underscored when the nontangible and the less than obvious direct economic benefits are viewed in the current milieu of American society. With high inflation rates, dwindling governmental support, loss of buying

power, rapid technological change, and increased cost for almost everything, it is no surprise that the public is clamoring for increased fiscal accountability from its educational enterprises.

The public pressure for productive results then falls on both educational and economic planners. Often both of these groups are at odds because one group seems to want more funding without more accountability, while the other group seems to want more accountability for less funding. The crux of the problem for planners then becomes the making of decisions which lead to growth rather than stagnation. Unfortunately, many decisions are made in reaction to rather than in anticipation of economic events. When a decision does need to be made, planners often find that the information they need is outdated, uneven, scattered, and unsystematically collected.

The problem for planners in small communities (less than 50,000) is exacerbated further due to the lack of resources such as personnel, money, and computer capabilities. Economic survival and growth of small communities is just as vital to the maintenance of the fabric of society as is the survival of the megalopolis. For if small communities are unable to prosper, then the problems of the larger communities will be magnified by the influx of people seeking the perquisits and resources of that area, i.e. human services, employment, and living space. Small community survival and growth will help to enhance the general quality of life for all by providing an opportunity for some to choose an alternative lifestyle.

Unfortunately, the necessary data which is needed by a small community is often sketchy and frequently subsumed into a larger geographical area. However, it should still be possible for a small community to develop enough usable data to make some decisions regarding its educational and economic development. For purposes of this report, a small community shall be defined

as any locality smaller than the Census Bureau's definition of a Standard Metropolitan Statistical Area. The S.M.S.A. as defined in 1977 is

> "an area which contains at least one city with 50,000 inhabitants or more or a city with 25,000 inhabitants together with those contiguous places having population densities of at least 1,000 persons per square mile with a combined population of 50,000 and which constitutes for general economic and social purposes, a single community providing that the country or counties on which they are located has a combined population of at least 75,000." (U.S.Census)

Since much of the statistics of our nation are gathered in relation to the S.M.S.A.'s, small communities have great difficulty sorting out meaningful data when they are included in the standard S.M.S.A. The City of Canandaigua is in the Rochester S.M.S.A. The district also includes all of the counties of Monroe, Wayne, Ontario, Livingston, and Orleans. A placement which lumps together an area greater than the total area of the states of Delaware and Rhode Island and which contained dozens of school districts and cities.

Small communities needing statistical data find themselves in a "Catch 22" situation for as the census statistical area gets larger more data is generated, thus losing the individual characteristics of the small town, and conversely as the statistical area gets smaller less census is provided. (S.M.S.A.'s provide information on 272 variables while information on Places lists 15 items.) Small communities would appear on the surface to be suffering from a lack of detailed data on which to base their planning strategies. However, by virtue of their size these communities' data, though spotty and scattered, is accessible.

It seems logical then to ask the question: Do small communities have enough information available to them to determine if their economic and education investments are adequate for growth? It would also seem logical

to ask: What information is necessary to make those decisions? Both of these questions can be answered through the application of Gale Jensen's policy framework for educational and economic development as adapted by Roger Hiemstra. This framework provides criteria for making optimum allocations of educational investment for communities at different levels of educational and economic development.

> The central thesis on which the framework is based is that the economic development of a community is inextricably linked to its educational development; that there are both right and wrong kinds of educational investment and the wrong kinds of educational investment will contribute to the economic stagnation and decline of a community, just as the right kinds will promote its economic development. (Jensen 1969)

Jensen's framework was originally designed to be applied to developing nations. However, it was applied by Hiemstra (1971) to moderate sized American communities (50,000 pop.) in the later stages of their development. This study will ascertain if small communities have sufficient data available to determine how their investments compare to the framework's criteria, as adapted by Hiemstra.

Hiemstra (1970) indicated that society in general and communities in particular, receive benefits from wise investments in two ways: first, through education's ability to raise the quality of all of the labor force, thus increasing both labor's productivity and the stock of knowledge relevant to production; and secondly, an educational upgrading of the population may accelerate the rate at which knowledge itself advances, and thereby improve the ability of people to handle the social and political reorganizational problems accompanying economic growth. It then becomes incumbent upon society and communities as part of society to promote continuous growth as it is in their own best interestes to do so.

Successful application of this framework to small communities would entail the attainment of several specific objectives:

1. Creation of a data locator checklist which itemizes places where data can be found.

2. Collection of specific data on a selected community.

3. Application of that data in relationship to the policy framework to the community.

4. Establishment of the community's economic level and recommendations for educational investment.

5. Suggested methodologies for refinement or substitutions of the framework's indices.

Attainment of these objectives should encourage other researchers in further use, application, or refinement of the framework, as well as provide help for planners in their decision making.

The hypothesis of this study is that Hierstra's adaptation of Jensen's framework can be effectively applied to small communities. The hypothesis suggests several related questions which need to be answered concerning a small community.

I. Can usable data be found concerning the economic condition of the community.

   A. What is the community's standard of living?

   B. What is the individual per capita income?

   C. How many people are unemployed or on assistance programs?

   D. What are the critical economic problems facing the community?

   E. What is the gross community product?

   F. How many people are involved with the CETA program? Or other governmental or private self-help projects?

   G. What are the number of people in each of the following occupational categories?

      1. Agriculture

      2. Manufacturing

      3. Construction

      4. Transportation

5. Trade

6. Services

II. What information is available concerning the various educational enterprises?

A. What investments are being made in public and private education?

1. Primary

2. Secondary

3. Vocational

4. Special Education

5. Higher Education

B. What has been the pattern of support for education from the community in regard to tax issues?

C. How many students are enrolled in the various schools?

D. How many professionals are engaged in formal education?

E. What are the current levels of education in the community's population?

F. What type and level of investment is being made in adult and continuing education?

G. What is the investment in occupational or on-the-job training programs?

H. What is the community's commitment to community education?

1. Mass media

2. Agencies

3. Out-reach programs

4. Citizen's group

DEFINITIONS

Framework for Decision Making

The specific framework which will be used in this study is that of Jensen's as adapted for American communities by Hiemstra. The theory suggests that there are optimal levels of investment for each of the educational enterprises in a community. Depending on the economic level of a community, there are suggested investments which should be made in education which optimize growth. The economic levels range in a four step array from a subsistence level to a highly complex industrial level.

Educational Enterprises

The framework posits that there are four types of educational endeavors which should be funded at appropriate levels if growth is to take place. These educational categories are: formal educational systems, continuing and adult educational programs, occupational/on-the-job training programs, and community education.

Small Community

For purposes of this study, the definition of a small community has to be more specific than it has been define previoulsy. Therefore, the definition of a small community needs to be further refined to be: Any incorporated locality smaller than an S.M.S.A. with a population of over 2,500 and which has a definite geographical identity which encompasses at least one school district. This definition should be useful enough to include most of the 21,159 places in the United States (U.S. Census) while also limited enough to allow the study of a complete unit containing both economic and educational indices. Incorporated was added to inlcude the dimension of taxation.

METHODOLOGY

The project will be utilizing a field study approach which will entail the collection of data on the City of Canandaigua which will be applied to the framework to ascertain the economic level of the community and to assess if the appropriate investments are being made in the educational enterprises. The two scales which will be applied in this matchup will be:

Scale I

REVISED GUIDELINES TO DETERMINE THE EDUCATIONAL-ECONOMIC DEVELOPMENT LEVEL

Characteristic	Level Choices			
	I	II	III	IV
A. -1 Percent of population unemployed	7% or more	4- 6%	3- 4%	2- 3%
A. -2 Percent of population on welfare rolls	2% or more	1- 2%	.8- 1%	.5-.7%
B. Percent of labor force in tertiary occupations	45% or less	45-60%	60-75%	75-85%
C. Effective Buying Income per capita	$2,000 or less	$2,000-$2,500	$2,500-$3,000	$3,000-$3,500
D. Percent of population in the age group 5 - 14	23% or more	19-22%	15-18%	10-14%
E. Number of public primary and secondary educators per 10,000 population	70 or less	70-80	80-90	90-100
F. Percent of age group 5 - 17 in school	75% or less	75-80%	80-85%	85-90%
G. Percent of age group 16 - 19 in school	60% or less	60-70%	70-80%	80-90%
H. Percent of age group 20 - 24 in school	20% or less	20-40%	40-60%	60-80%

Scale II

ECONOMIC LEVEL

Investments	III	IV
Total Ed. Spent	10% of Funds Avail.	15% of Funds Avail.
Cont. Adult Ed.	30% - 35%	35% - 40%
Job Training	15%	15%
Community Ed.	2%	5%
Formal Ed.	50 - 55%	40% - 45%

Each of these scales will be applied to the data collected from the City of Canandaigua to discover first if sufficient data is available and secondly to place Canandaigua on the framework. Canandaigua was selected as the setting for the study because it met the definition of a small community, and it also was accessible to the researcher.

DATA COLLECTION PROCEDURES

The general data collection process will be to gather information from the City of Canandaigua which relates to the various categories on Scales I and II. In order to do this, a preliminary locator checklist has to be established.

Data Locator Checklist

A. Percent of population making a subsistence living	a) Census Data b) County Welfare Report c) County Unemployment Report d) Bond Issue/Federal Grants
B. Percent of labor force in tertiary occupation	a) County Census Data b) County Economic Development Plan c) Chamber of Commerce Reports d) Bond issue/Grant Applications
C. Annual community income per capita	a) Bond Report b) County Census Data c) Grant Applications

		d) Chamber of Commerce e) County Economic Development Plan
D.	Percent of population in age group 5 - 14	a) Census Data b) School Reports c) City Grant Applications
E.	Number of primary and secondary educators per 10,000 population	a) School Budget Reports
F.	Percent of age group 16 - 19 in school	a) Census Data b) County Economic Development Agency
G.	Percent of age group 20 - 24 in school	a) County Economic Development Plan b) City Grant Application c) Census Data

Educational Investments

Characteristic		Located
A.	Formal Education	a) School District Budget Reports b) Catholic Elementary School Reports c) Community College Budget Reports
B.	Continuing/Adult Education	a) Community College Reports b) United Fund Budget Requests c) City Budget Requests d) Individual Agency Reports e) Cooperative Extenstion Service
C.	Training for Jobs	a) BOCES Budget/Report b) County CET[illegible]eport and Grant Application c) Voplex and Mobil Personnel Office d) VA Personnel Office
D.	Community Education	a) United Fund Budget Requests b) WCG[illegible] Radio and TV c) Cooperative Extension Service d) Salvation Army e) Various Churches

After the checklist is developed each of the agencies will be contacted to collect the data and to discover if additional data sources are available. If all of the data categories are completed, then a judgement will be made concerning both the economic level and the optimal educational investment level of Canandaigua.

If it is discovered that data is insufficient in one or more areas, then approximate equalities will be developed to substitute for the missing variable information. The final step will be to discover if there are several different key factors which exist that are readily available to any community and which adequately reflect the results of the application of the framework. That is, are there only five items that a planner needs to know to effectively apply the essence of the framework rather than all of the data item?

It is anticipated that not all of the data will be readily available or that it will not coincide with other temporal data. Therefore, it is expected that some extrapolations and substitution may be made. However, this process of substitution might be the most valuable outcome of this study as it is expected that many small communities do not have the exact applicable data, resources, or time to replicate Hiemstra's study.

It is obvious that the external validity of this project is not evident. The application of this study to other small communities will be left to other researchers. However, the feasibility of doing further research might be enhanced as a result of the specific findings or through applications or adaptations of this study. Some attempt will be made in later chapters to increase the probability of applications. For example, it might be suggested that a survey be taken of the key people in the economic area to discover their feelings about the community's economic growth. Even though the results of these interviews are qualitative they might prove to be more accurate than national or census data material.

The significance of this study is limited but is only limited by the creativity of future appliers. It is only a one-community study which has been adapted to an educational and economic framework. However, it could have wide use for the over 21,000 communities of 2,500 or more population in this country. The study along with the body of knowledge supporting it might also be useful for planned communities or for communities that want more planning. At worst it will give some individuals, who have to make decisions regarding educational investments, a place to start or a series of guidelines to look at. Finally, it might assist in the realization that we all live in an interdependent world where total development of the individual is not simply a personal but rather public policy.

Setting Description

The City of Canandaigua developed as a result of its rich agricultural land and abundant water supply. American Revolutionary soldiers passing through the area returned after the war to settle and farm the area. By 1789, Canandaigua was incorporated as a village and later, in 1913, as a city.

The development of the Erie Canal brought additional economic prosperity and population growth to the Canandaigua area. The canal made a convenient outlet for its farm products. The development of the canal also created strong economic ties between Canandaigua and Rochester which exist even today. The Canandaigua area economy has become more diversified over the years, developing both industrial and service-oriented jobs.

The City, which is the County Seat for Ontario County, is located in upstate New York, less than twenty-five miles southeast of the City of

Rochester. It is approximately midway between and 75 miles from the Cities of Buffalo and Syracuse. It is 4.7 square miles in land area and situated on the northern tip of Canandaigua Lake. It has a population of 12,125 persons. (1975)

Major highways in and around the City include the New York State Thruway (three interchanges serving the City), U.S. Route #20 and State Highways #5, #332, and #488. The City is served by Penn Central freight service, three independent bus lines, and several interstate trucking companies. The Rochester-Monroe County Airport, located 35 miles away, is served by U.S. Air, American, and United Airlines. The Canandaigua and Canandaigua-Hopewell Airports service private and commercial aircraft.

Because of its proximity to Rochester, the City is basically residential in character with many of its business and professional residents employed in the City of Rochester.

Besides its residential areas, the City has a commercial center and industrial sectors. Its location on Canandaigua Lake with its parks and recreational areas provide its permanent and summer residents with a variety of summer sports and entertainment.

Some of the major industrial and institutional employers within the City include: Canandaigua Wine Company; Canandaigua Plastics, Division of Voplex Corporation; Labelon Corporation; Unelec Corporation, Subdivision of North American Phillips Corporation; Welco Ad Corporation; Rochester Gas and Electric Corporation; Rochester Telephone Company; Roseland Park; Sonnenberg Gardens; and Community College of the Finger Lakes.

The City maintains its own police and fire protection agencies. Electricity and gas are furnished by Rochester Gas and Electric Corporation and New York State Electricity and Gas Corporation. As of May 1981, the City had branches of five banks including commercial, savings, and savings and loan associations.

A. POPULATION CHARACTERISTICS

The City of Canandaigua experienced a moderate rate of population increase during the 1960 - 1970 decade. In 1960, Canandaigua had a population of 9,370; by 1970 this figure had increased by 12.1 percent to 10,488. By 1975 the population continued to increase to 12,125, a 15.7 percent increase.

One reason for this in-migration of population to the City can be attributed to a larger demographic movement of decentralization of population out of the City of Rochester and surrounding area. Although the City of Canandaigua is of sufficient size to generate growth on its own, the major future growth should continue to emanate from Rochester and Monroe County, due mainly to the improved transportation facilities which have made commuting easier.

Age Distribution

From Table I it can be seen that there has been a relatively small change in sex and age distribution during the 1960 - 1970 decade. As indicated in Table I, 8.5 percent of the City's population was under five years of age in 1970, compared to 11.7 percent in 1960. The major school age group (5 - 14 years) increased during this period by 1.7 percent to 20.1 percent of the population.

The 15 - 24 age group in Canandaigua accounted for 16.2 percent of the City's population in 1970, up 4.6 percent from the previous decade. This age cohort which includes high school pupils, college students and other young adults, shows the largest increase and may be attributed to the decision of young people to stay in the City for their education or job opportunities.

The completion of the new Community College of the Finger Lakes, in all probability, has influenced this statistic.

The age groups between 25 and 65 have decreased slightly in population relative to the total population between 1960 and 1970. The last age group (65 and over) demonstrated a slight decrease of 1.2 percent from 13.6 percent in 1960 to 12.4 percent in 1970. While the percentage of population this group represents has decreased slightly, the absolute number of persons has increased and plans should be made to provide appropriate facilities, especially in the area of recreation and housing for this group.

Sex Distribution

The distribution of the population by sex for the City of Canandaigua is also shown in Exhibit 1. During the 1960 - 1970 decade the percentage of males increased slightly by 0.7 percent to 48.3 percent from 47.6 percent with a corresponding decrease in females of -0.7 percent to 51.7 percent in 1970 from 52.4 percent in 1960.

In 1960 the number of females in the City exceeded the number of males in each age group with the exception of the pre-school and school-age groups (under 5, and 5 - 14). In 1970 one additional age group (45 - 54) recorded more males than females. The difference in the proportion of females to males in the City is significant only in the 65 and over age group.

In 1960 this age group recorded 504 males and 772 females, 1970 information shows 455 males and 848 females. This shift in sex distribution can probably be attributed to the fact that females generally have a longer life expectancy than males.

COMMUNITY PROFILE

EXHIBIT "1"

SEX AND AGE DISTRIBUTION - 1960-1970
CITY OF CANANDAIGUA

Age Group	City of Canandaigua 1960				City of Canandaigua 1970				% Total Change 1960-1970
	Male	Female	Total	% of Total	Male	Female	Total	% of Total	
Under 5	585	516	1,101	11.7%	467	421	888	8.5%	- 3.2%
5 - 14	899	825	1,724	18.4%	1,134	979	2,113	20.1%	1.7%
15 - 24	505	581	1,086	11.6%	819	885	1,704	16.2%	4.6%
25 - 34	505	594	1,099	11.7%	551	592	1,143	10.9%	- 0.8%
35 - 44	574	594	1,168	12.5%	582	608	1,188	11.3%	- 1.2%
45 - 54	518	529	1,047	11.2	615	603	1,218	11.6%	0.4%
55 - 64	369	500	869	9.3	445	484	929	9.0%	- 0.3%
65 & Over	504	772	1,276	13.6%	455	848	1,303	12.4%	- 1.2%
TOTALS	4,459	4,911	9,370	100.0%	5,068	5,420	10,488	100.0%	+10.7%

Racial Composition

The City of Canandaigua had an extremely small minority population in 1960 of 27 persons, or 0.2 percent of the total population. In 1970, 66 persons were listed as minorities of 0.6 percent of the total population.

Family Size

The average family size for the City of Canandaigua increased to 3.8 in 1970 from 3.2 in 1960. Such an increase is consistent with the population in-migration which the City has been experiencing during the same period. However, due to current social and cultural trends which indicate a smaller nuclear family, the average family size in Canandaigua will probably decline in the future.

B. INCOME CHARACTERISTICS

There has been a steady increase in per capita income in the City of Canandaigua during the 1970's. From a figure of $3,198 in 1969, the per capita income rose to $4,515 in 1974.

This 41.2 percent increase in per capita income compares to a 40.5 percent increase in the rest of Ontario County.

The percent of low and moderate income persons in the City was 51 percent in 1970; and there is no more current data available to indicate what, if any, changes have taken place since that time. Further, 164 families were below the poverty level or 6.5 percent of the total number of families in Canandaigua.

C. ECONOMIC CONDITIONS

According to Mr. William Ramage, Economist for the New York State Department of Labor, Division of Research and Statistics,

unemployment information specifically for the City of Canandaigua is not readily available; therefore, information which is available for Ontario County as a whole must be used. In 1970, Ontario County had an unemployment rate of 4.4 percent; by 1974 this rose one point to 5 percent. In 1975 the rate was 9.5 percent, and by 1976 reached a high of 10.0 percent. By last year (1979), the rate had dropped 3.5 percentage points to 6.5 percent and as of February of this year was up once again to 8.7 percent. It is assumed that the unemployment rates for the County would be reflective of the Canandaigua area.

UNEMPLOYMENT RATES

Year	Ontario County Unemployment Rate	New York State Unemployment Rate	U.S. Unemployment Rate
1975	9.5%	9.5%	8.5%
1976	10.0	10.3	7.7
1977	8.8	9.1	7.0
1978	7.1	7.7	6.0
1979	6.5	7.1	5.8
January 1980 . . .	8.7	8.4	6.2
February 1980 . . .	8.4	8.1	6.0

Source: New York Department of Labor. Monthly rates for the United States are seasonally adjusted. Monthly rates for New York State and the Country are not seasonally adjusted.

Ontario County and the City of Canandaigua have shown good growth rate in employment in the past decade. The Country's percentage of employed persons grew by 24 percent during the 1960 - 1970 decade while the City of Canandaigua grew by approximately 14 percent.

Exhibits 2 and 3 indicate that for the 1960 - 1970 decade the County and the City experienced similar growth in both occupation and industry groups, with two exceptions--professional and technical workers, and clerical workers.

Total manufacturing employment increased in both Canandaigua and the County by 1.4 percent and 0.7 percent respectively for the 1960 - 1970 decade. Likewise, retail employment showed a slight gain for this same period with a 0.9 percent increase for the City and 0.5 percent increase for the County.

COMMUNITY PROFILE - EXHIBIT "2"

ECONOMIC CHARACTERISTICS

OCCUPATION GROUPS - PERCENTAGE OF EMPLOYED PERSONS

1960	Number Employed	Prof. Tech. Workers	Farmers Farm Managers	Managers Admin. (excl.Fm)	Clerical Workers	Sales Workers	Craftsman Forman	Operations	Serv. Workers Priv. Hsd.	Serv. Workers Other	Laborers
Canandaigua	3,683	16.9	0.2	8.1	16.3	9.6	10.2	14.4	2.7	13.9	3.3
Ontario County	24,406	11.9	5.3	7.6	13.9	7.5	13.9	16.9	1.8	9.9	7.4
1970											
Canandaigua	4,194	16.6	0.3	10.3	13.9	6.6	12.2	15.4	1.1	19.7	3.9
Ontario County	30,275	14.9	2.6	7.3	15.3	5.8	15.6	15.5	1.2	14.1	5.8
Percent of Change (1960-1970)											
Canandaigua	(14%) 5,119	-.3	-.1	2.2	-2.4	-3.0	2.0	1.0	-1.6	5.8	-.6
Ontario County	(24%) 5,869	3.0	-2.7	-.3	1.4	-1.7	1.7	1.6	-.6	4.2	-1.6

Source: N.Y.S. Department of Commerce, Public Fact Book
Part I, Profiles of Business & Industry 1962 and 1976

COMMUNITY PROFILE - EXHIBIT "3"

ECONOMIC CHARACTERISTICS

INDUSTRY GROUPS - PERCENTAGE OF EMPLOYED PERSONS

1960	NUMBER EMPLOYED	Manufacturing TOTAL	Manufacturing DURABLE GOODS	Manufacturing NON-DURABLE GOODS	WHOLE-SALE TRADE	RETAIL TRADE	AGRIC. TRADE	MINING	CONSTR.	BUSINESS REPAIR SERVICES	PERSONAL SERVICES
City of Canandaigua	3,683	23.0	10.8	12.2	2.3	18.7	1.0	0.1	3.5	1.4	5.7
County of Ontario	24,406	26.8	16.2	10.6	2.5	16.6	9.7	0.2	4.9	1.9	4.3
1970											
City of Canandaigua	4,194	24.4	12.3	12.1	2.8	19.6	1.1	0.0	3.7	1.6	3.8
County of Ontario	30,275	27.5	17.9	9.5	2.4	17.1	5.5	0.3	6.5	2.1	3.6

1960	Professional & Related Services TOTAL	Professional & Related Services HOSPITALS	Professional & Related Services EDU. CAL.	ENTERTAIN.	FINANCIAL REAL EST.	Transportation, Communication & Utilities TOTAL	Transportation, Communication & Utilities RAILROADS	Transportation, Communication & Utilities OTHER TRANS.	Transportation, Communication & Utilities COMMUN. UTIL.	PUB. ADMIN.	NOT REPORTED
City of Canandaigua	26.0	14.0	6.3	0.8	3.4	5.6	1.6	1.7	2.3	4.3	3.1
County of Ontario	16.8	6.7	6.4	0.7	2.7	5.6	1.6	1.7	2.3	4.3	3.1
1970											
City of Canandaigua	29.8	12.1	7.6	2.1	3.2	4.2	1.5	1.9	0.8	3.7	x
County of Ontario	21.5	7.0	8.8	0.9	2.7	5.7	2.8	1.4	1.5	4.3	x

Source: NYS Department of Commerce, Public Fact Book Part I, Profiles of Business & Industry 1962 & 1976

D. HOUSING CONDITIONS

Based on 1970 census housing data, the City of Canandaigua has a total of 3,787 housing units, of which 3,580 are occupied units with a tenure distribution of 2,040 owner and 1,540 renter.

The most accurate measure of the condition of housing in any community is the number of substandard housing units in its total housing stock. The City of Canandaigua, being an older and well-established community, has an extremely old housing stock. Approximately 70 percent of all its housing units were built prior to 1939.

While the City has a high percentage of very old housing units, it does not generally have a corresponding number os substandard units. The exterior building conditions surveys conducted for the City in 1974 and 1979 demonstrated an average of 12.2 percent substandard units on a City-wide basis. In the central area of the City, however, 43.1 percent of the housing is classified as substandard. This area has beed designed as a Neighborhood Strategy Area (NSA) by the City and will receive a comprehensive treatment for its many problems and needs.

BUILDING PERMITS

Year	Total Permits	Dwellings	Apts./ Condos.	Commercial/ Industrial
1975	5	3	-	2
1976	8	-	-	8
1977	14	6	-	8
1978	16	5	-	11
1979	10	3	-	7

E. OTHER AREAS

Continuing efforts are being made to upgrade the City of Canandaigua's public facilities in all its neighborhoods, with particular emphasis on its oldest areas.

The City has developed a five-year Capital Improvement Program (CIP) which provides for needed improvements in the replacement of old, inefficient and deteriorated public facilities. Further, the City has prepared a Redevelopment Plan and undertaken several redevelopment projects in its central business district (CBD) in efforts to upgrade and revitalize this area.

Data Application and Implications

The narritive and other data supplied below are superimposed onto the revised guidelines for comparison purposes.

SCALE I

Characteristic	Level Choices III	Level Choices IV	Canandaigua
A. -1 Percent of population unemployed	3- 4%	2- 3%	7.5%
A. -2 Percent of population on welfare rolls	.8- 1%	.5- .7%	6.5%
B. Percent of labor force in tertiary occupations	60- 70%	75- 85%	81%
C. Effective Buying Income per capita	$2,500- $3,000	$3,000- $3,500	$4,716 per cap.
D. Percent of population in the age group 5 - 14	15- 18%	10- 14%	9%
E. Number of public primary and secondary educators per 10,000 population	80- 90	90- 100	172
F. Percent of age group 5 - 17 in school	70- 80%	80- 90%	90%
G. Percent of age group 16 - 19 in school	70- 80%	80- 90%	82%
H. Percent of age group 20 - 24 in school	40- 60%	60- 80%	73% (est.)

SCALE II

Investment	Investment Level III	Investment Level IV	Canandaigua
Total Ed. Spent	10% of funds	15%	20.5% ($10,700,000)
Cont. Adult Ed.	30- 35%	35- 40%	9.5% ($1,000,000)
Job Training	15%	15%	18.7% ($2,000,000)

SCALE II (cont.)

Investment	Investment Level III	Investment Level II	Canandaigua
Community Ed.	2%	5%	6.5% ($700,000)
Formal Ed.	50- 55%	40- 45%	65.3% ($7,000,000)

Discussion

Canandaigua can clearly be placed as a level IV community as it meets or exceeds most of the guidelines. However, two of the negative indicators are too high in comparison to the guidelines. It would seem that both the unemployment and welfare guidelines need to be revised as trends over the last 10 years seem to indicate that the figures used now in the guidelines are unrealistic in light of current economic realities.

The investment level guidelines indicated that more than enough of the available money is being spent on educational enterprises. However, they also indicate that too much is being spent on formal education. The higher amount being spent in the formal education section is probably reflective of the growth that was needed in the 1970's to handle the baby boom. Unfortunately, the population decline has not caused a realignment of funds being spent on formal education. Since only part of the continuingly higher formal education budgets can be attributed to inflationary pressures, it is them surmised that major reductions in this enterprise will have to be made. Ideally, these reductions should be shifted to Adult and Continuing education as expenditures there are low. It will be necessary to also increase spending in the job training area. Even though the current percentage of 18.7% exceeds the guide-

lines, over 50% of that investment reflects C.E.T.A. training.

The investment guidelines suggest that Canandaigua will need to provide more money for both continuing and job training education. If it doesn't increase the amounts of these contributions, Canandaigua will soon see shortages in its skilled and semi-skilled work force and would be unable to meet the demand for retraining. Perhaps some of the funding and personnel from the formal education enterprise could be shifted to meet the expected need.

The guidelines do offer an effective tool for planning for the educational needs of a community. Most of the information that is needed to make a determination of the various levels does seem to be available to researchers. Similar types of data should be available in any small community for the following reasons:

1. Wide expansion in municipal bond financing since 1970.
2. Passage of the Freedom of Information Act--guaranteeing accessibility/availability of information.
3. Widespread dispersal of federal and state grant funds.
4. General trend for public agencies, bodies, boards to be accountable to the people.

However, when information is not readily available to a researcher some adaptations or substitutions could be made.

Substitutions could be created which provide some direction for the recommendations for the community. For example, it might be found that for each 1% increase in unemployment or welfare that there should be a 10% increase in the job training enterprise.

Also, a bond rating which Standard and Poors and Moodys gives could be used to quickly establish whether the community is at a II, III, or IV economic level. In quickly checking out the usefulness of the bond rating notion, it was interesting to find that in 1969 Jackson County sewer bonds were rated as double B bonds, while a 1970 Ann Arbor, Michigan issue was rated triple A. Incidentally, Canandaigua's 1979 bonds were rated double A. Therefore, an "A" bond rating corresponds with a level IV community; a "B" rating with a level III, etc. In the absence of specific data for a small locality, power actor surveys could be conducted to discover the perceptions of opinion leaders in the educational and economic fields. (see appendix) These perceptions could then be used to set priorities in the areas where the influence leaders believe to be emphasized.

Applications of the guidelines might be the most usefull in being able to recognize that more funds should be provided for a specific enterprise rather than their refinement to the exact percentage each enterprise should receive. It is critical that planners are aware of the interrelationship between educational enterprises and economic development because unawareness wastes both human and economic resources.

The five objectives of this field project have been met. A data location checklist has been established and used. Specific data on Canandaigua has been collected and applied to the policy framework. Specific recommendations have been made for the communities investments after the level of the community was established. Finally, some methods were suggested to assist the researcher who does not have all of the data available to make sound recommendations.

It seems that the next research step would be the application of the guidelines to several communities and then a re-study of them over a several year period to ascertain the validity and applicability of the theory. Perhaps an updating of Hiemstra's original study in the same communities would also be useful. It might also be useful to apply the framework at the beginning of a planned community and to study the results over a period of time. The potential benefits of the framework's widespread use are enormous if one considers the number of potential localities--over 21,000 with 2500 population or more. More research needs to be done, but the results of such research could be very significant in a time of dwindling resources and society's need to have a well educated, flexible work force.

BIBLIOGRAPHY

Hiemstra, Roger. Educational Investments and Economic Growth: A Case Study in Continuing and Community Education. Unpublished dissertation, University of Michigan, 1970.

Hiemstra, Roger. The Educative Community. Professional Educators Publications Inc: Lincoln Nebraska, 1972.

Jensen, Gale and Medline, W., Editors. Readings on the Planning of Education for Community and National Development. Ann Arbor Publishers: Ann Arbor, Michigan, Vol. I., 1969.

New York Department of Commerce. Public Fact Book: Profiles of Business and Industry. New York Department of Commerce: Albany, New York, 1962 and 1976.

U.S. Business of the Census. County and City Data Book 1977. U.S. Government Printing Office: Washington, D.C., 1977.

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